

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

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OCT 29 2003

Listing of Claims:

TECH CENTER 1600/2900

1. (previously amended) A method for enhancing the efficiency of delivery of a nucleic acid to a cell, said method comprising

a) providing to said cell a molecule which causes morphology of a cell to be transfected to change from a stellate morphology to an elongated morphology, said molecule being Tenacin C; and

b) providing to said cell a nucleic acid encoding a heterologous protein or polypeptide for the transfection of said cell, whereby the presence of said molecule increases the efficiency of delivery of said nucleic acid to said cell when compared to cells transfected in the absence of said molecule.

2. (withdrawn) The method of claim 1, wherein said agent is an isolated nucleic acid encoding a protein or a polypeptide, wherein said protein or said polypeptide when expressed in said cell is capable of enhancing the cytoskeletal permissiveness of said cell for transfection.

3. (previously amended) The method of claim 1, wherein the nucleic acid encoding said heterologous protein or polypeptide is cloned in a vector which is provided to said cell simultaneously with providing said molecule.

4. (previously amended) The method of claim 1, wherein said nucleic acid encoding said heterologous protein

or polypeptide is cloned in a vector which is provided to said cell prior to providing said molecule.

5. (previously amended) The method of claim 1, wherein said nucleic acid encoding said heterologous protein or polypeptide is cloned in a vector which is provided to said cell after providing said molecule.

6. (withdrawn) The method of claim 1, wherein said agent is denatured collagen or a peptide thereof.

7-9. (canceled)

10. (withdrawn) The method of claim 2, wherein said protein is one or more of Tenascin C, TB4 and peptides thereof.

11. (withdrawn) The method of claim 2, wherein said isolated nucleic acid is provided to said cell using a vector selected from the group consisting of a plasmid vector, a viral vector, and a linearized nucleic acid.

12. (canceled)

13. (withdrawn) The method of claim 1, wherein enhancing said cytoskeletal permissiveness for transfection comprises inhibiting DNAase I activity in the milieu surrounding or the cytoplasm of said cell.

14-16. (canceled)

17. (withdrawn) The method of claim 1, wherein said agent is a compound capable of modulating an ion channel in said cell.

18. (canceled)

19. (withdrawn) The method of claim 1, wherein said agent is a compound capable of rendering G-Actin less susceptible to proteolysis upon binding with G-Actin.

20. (withdrawn) The method of claim 19, wherein said compound is selected from the group consisting of beryllium fluoride and a cadmium salt.

21. (canceled)

22. (withdrawn) The method of claim 21, wherein said TB4 is indirectly upregulated by growing said cell on a Tenascin C inducing substrate.

23. (withdrawn) The method of claim 22, wherein said Tenascin C inducing substrate is denatured collagen or a peptide thereof.

24. (withdrawn) The method of claim 1, wherein said agent is a modulator of an intermediate in the Tenascin C and TB4 receptor-signaling pathway.

25. (withdrawn) The method of claim 1, wherein said agent is a cytochalasin.

26. (canceled)

27. (previously amended) A composition for enhancing the efficiency of delivery of a nucleic acid to a cell, said composition comprising

a) tenascin C which causes the morphology of a cell to change from a stellate morphology to an elongated morphology; and

b) a nucleic acid encoding a heterologous protein or polypeptide for the transfection of said cell.

28. (previously amended) The composition of claim 27, wherein said nucleic acid encoding said heterologous protein or polypeptide is cloned into a vector which is selected from the group consisting of a plasmid vector, a viral vector and a linearized nucleic acid.

29. (withdrawn) The composition of claim 27, wherein said agent is an isolated nucleic acid encoding a protein or a polypeptide, wherein said protein or said polypeptide when expressed in said cell is capable of enhancing the cytoskeletal permissiveness of said cell for transfection.

30. (withdrawn) The composition of claim 29, wherein said isolated nucleic acid is a component of a nucleic acid delivery system.

31. (withdrawn) The composition of claim 29, wherein said polypeptide is selected from the group consisting of TB4, Tenascin C and peptides thereof.

32. (canceled)

33. (previously amended) A kit for enhancing the efficiency of delivery of a nucleic acid to a cell, said kit comprising

a) an instructional material;

b) tenascin C which causes morphology of a cell to change from a stellate morphology to an elongated morphology; and

c) a nucleic acid encoding a heterologous protein or polypeptide for transfection into said cell.

34. (previously presented) The composition of claim 27, wherein said cell is a vascular smooth muscle cell.

35. (previously presented) The composition of claim 27, further comprising a vehicle that is suitable for pharmaceutical delivery.

36. (previously presented) The composition of claim 35, wherein said vehicle is a liposome forming lipid.

37. (currently amended) The composition according to claim 27, further comprising a carrier that permits controlled release of said molecule, said carrier being selected from the group consisting of controlled release film, nanoparticle, and microparticle.

38. (previously presented) The composition of claim 37 coated onto a tissue or organ localizing device.

39. (previously presented) The composition of claim 38, wherein said localizing device is selected from the group consisting of a stent, a vascular catheter and a urinary catheter.